

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: FAIL-SAFE

Report Number: P

Luminaire Tested: **4APN-35L935-X-UNV-ASY**

Issue Date: 06/06/2024



Test Information

Test Method: LM-79-08
Report Number: P
Test Lab: INNOVATION CENTER(G2)
Issue Date: 06/06/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 4APN-35L935-X-UNV-ASY
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture Ambient Light w/
ASYMMETRIC Lens
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

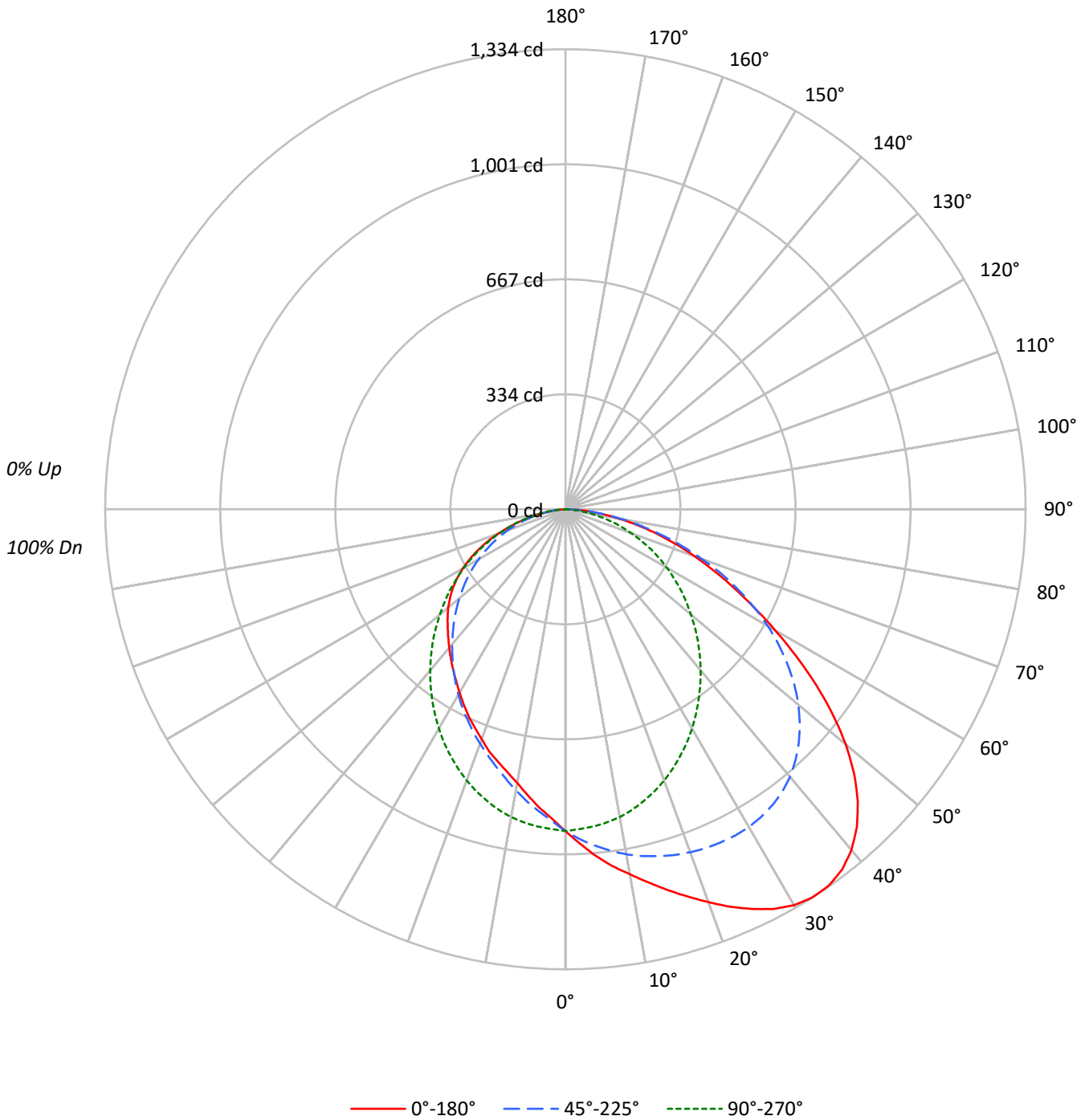
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2889.9 lumens
Efficiency: N/A
Efficacy: 71.5 lumens/watt
Spacing Criteria (0/90/45): 1.53 / 1.18 / 1.46
Luminous Opening: Rectangular (W 0.29' x L: 3.83' x H: 0')
CIE Type: Direct

Input Watts (W): 40.4
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT

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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20				20
RC	80				70				50				30				10				0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																					
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	102	102	102	100
1	109	104	100	96	106	102	98	94	97	94	91	93	91	88	90	88	86	86	86	86	84
2	99	90	83	78	96	88	82	77	85	80	75	82	77	73	79	75	72	72	72	72	69
3	90	79	71	64	87	78	70	64	75	68	63	72	66	61	69	64	60	60	60	60	58
4	82	70	61	54	80	69	60	54	66	59	53	64	57	52	62	56	52	52	52	52	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	45	45	45	43
6	69	56	47	40	68	55	46	40	53	46	40	51	45	39	50	44	39	39	39	39	37
7	64	51	42	36	63	50	41	35	48	41	35	47	40	35	45	39	35	35	35	35	33
8	60	46	37	32	58	45	37	31	44	37	31	43	36	31	42	35	31	31	31	31	29
9	56	42	34	28	54	42	34	28	40	33	28	39	33	28	38	32	28	28	28	28	26
10	52	39	31	26	51	38	31	26	37	30	25	36	30	25	36	30	25	25	25	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	8982	8982	8982
5°	9747	8928	8390
10°	10500	8859	7872
15°	11390	8730	7549
20°	12419	8576	7268
25°	13585	8375	7043
30°	14737	8155	6817
35°	15652	7914	6671
40°	16208	7662	6583
45°	16322	7398	6568
50°	15893	7116	6640
55°	14881	6862	6682
60°	13526	6550	6616
65°	12265	6194	6360
70°	11226	5742	5841
75°	10185	5163	5022
80°	8909	4313	3870
85°	7500	3137	2883



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	88.6	3.1
10°-20°	257.7	8.9
20°-30°	403.7	14.0
30°-40°	506.2	17.5
40°-50°	538.8	18.6
50°-60°	486.4	16.8
60°-70°	360.1	12.5
70°-80°	197.6	6.8
80°-90°	50.7	1.8
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	750.1	26.0
0°-40°	1256.2	43.5
0°-60°	2281.5	78.9
0°-90°	2889.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2889.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	933	933	933	933	933	
5°	1009	979	924	879	868	98
15°	1143	1041	876	774	757	326
25°	1279	1066	788	672	663	592
35°	1332	1047	673	566	568	831
45°	1199	957	543	455	482	919
55°	887	787	409	346	398	791
65°	538	554	272	234	279	537
75°	274	290	139	120	135	291
85°	68	67	28	26	26	80
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	933.0	933.0	933.0	933.0	933.0	933.0	933.0	933.0	933.0	933.0	933.0
2.5°	970.6	968.7	966.4	965.6	962.2	957.6	953.3	953.3	948.4	936.5	928.0
5°	1008.6	1005.5	999.7	995.1	987.9	979.0	970.2	964.8	953.0	934.9	923.8
7.5°	1043.5	1039.6	1032.3	1023.5	1011.6	998.6	984.0	972.5	954.5	930.3	916.1
10°	1074.1	1070.7	1061.9	1051.1	1034.3	1015.9	994.4	977.1	952.6	922.7	906.2
12.5°	1107.9	1104.4	1092.2	1077.6	1054.6	1030.0	1001.7	977.9	947.6	911.5	892.8
15°	1142.8	1138.2	1124.4	1104.8	1074.1	1041.2	1006.3	975.6	939.5	898.1	875.9
17.5°	1177.3	1172.7	1155.4	1130.5	1092.2	1051.1	1008.2	970.2	928.0	881.6	857.5
20°	1212.2	1207.6	1185.7	1154.3	1107.9	1058.4	1007.8	962.2	914.2	862.8	837.1
22.5°	1247.1	1241.7	1215.3	1176.9	1120.9	1063.4	1003.6	951.0	897.0	841.4	813.8
25°	1278.9	1273.6	1244.4	1199.2	1134.7	1065.7	996.3	935.7	877.8	817.6	788.4
27.5°	1306.5	1300.0	1269.7	1219.9	1146.6	1066.5	986.7	918.4	855.6	791.9	762.4
30°	1325.7	1320.0	1287.7	1234.4	1153.5	1063.8	974.4	898.1	829.9	764.3	733.6
32.5°	1334.1	1329.2	1297.3	1241.3	1154.7	1056.9	959.5	875.5	803.0	735.1	704.1
35°	1331.8	1326.9	1296.6	1240.2	1151.2	1046.9	940.7	849.8	774.3	704.8	673.4
37.5°	1317.3	1311.5	1283.9	1229.8	1141.3	1032.3	919.2	821.8	743.2	673.8	642.0
40°	1289.7	1283.9	1260.1	1210.3	1124.4	1012.8	894.7	791.9	711.4	641.2	609.7
42.5°	1250.2	1244.0	1225.2	1179.6	1100.2	987.1	866.7	760.1	677.6	609.7	576.8
45°	1198.8	1192.6	1180.0	1141.3	1068.8	956.8	834.8	725.6	642.3	574.1	543.4
47.5°	1135.1	1129.7	1123.6	1093.7	1030.0	921.9	799.2	688.7	605.5	540.7	509.3
50°	1061.1	1055.7	1057.7	1037.3	985.2	881.6	760.1	650.0	567.6	503.5	475.1
52.5°	977.1	972.9	982.1	973.3	933.0	836.8	718.3	610.1	528.8	468.2	441.0
55°	886.6	882.0	899.7	902.3	874.7	787.3	670.7	568.7	489.7	433.7	408.8
57.5°	793.4	789.6	812.2	824.9	811.1	734.0	622.8	526.1	449.4	397.7	372.7
60°	702.5	699.5	723.3	744.0	742.4	677.6	572.9	480.1	409.2	361.2	340.2
62.5°	617.0	613.6	637.4	661.9	670.7	617.4	523.5	434.9	368.9	324.8	306.0
65°	538.4	535.0	555.3	580.6	596.7	554.5	470.2	388.1	328.3	288.0	271.9
67.5°	466.3	466.3	479.0	502.4	521.9	490.1	415.7	343.6	286.5	253.9	237.8
70°	398.8	398.4	407.6	424.1	446.8	421.1	360.5	296.8	247.0	218.2	204.0
72.5°	334.8	337.5	340.9	353.6	377.3	355.1	305.6	250.8	208.2	182.9	171.0
75°	273.8	273.4	278.4	289.5	306.8	290.3	250.8	205.9	169.9	149.2	138.8
77.5°	215.5	215.1	219.4	225.9	240.4	227.4	197.9	164.5	132.3	115.0	107.8
80°	160.7	160.7	164.5	168.0	178.7	168.3	147.6	123.1	97.0	83.6	77.8
82.5°	111.6	113.9	112.4	117.0	123.1	114.3	101.2	84.4	64.4	55.2	51.4
85°	67.9	69.8	67.9	71.7	74.4	66.7	60.2	50.2	37.2	31.1	28.4
87.5°	34.9	34.5	34.1	36.0	36.8	32.2	28.4	24.2	16.5	12.7	10.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	933.0	933.0	933.0	933.0	933.0	933.0	933.0	933.0	933.0	933.0
2.5°	923.0	925.3	921.9	909.2	904.3	898.9	896.6	894.3	898.5	897.4
5°	915.4	912.7	903.9	887.8	879.3	870.5	866.3	863.6	869.4	868.2
7.5°	905.0	897.4	884.3	864.8	854.0	842.1	836.4	832.9	836.8	836.0
10°	892.0	879.3	863.2	839.8	827.2	814.1	807.6	802.6	805.7	805.3
12.5°	875.5	859.0	839.4	813.0	799.9	786.5	780.8	777.3	781.2	780.0
15°	857.1	837.1	814.5	787.7	773.5	761.2	757.0	754.3	757.4	757.4
17.5°	836.8	813.4	788.4	761.2	747.8	738.2	734.0	732.1	733.6	735.9
20°	814.1	788.1	761.2	734.8	723.3	713.3	709.4	707.5	711.0	709.4
22.5°	789.2	761.6	733.6	708.7	698.3	688.4	684.5	683.4	687.2	685.7
25°	762.8	732.8	705.2	682.6	672.2	663.8	660.4	659.2	661.1	663.0
27.5°	737.8	704.1	676.9	656.5	647.3	639.3	636.2	634.3	635.8	638.1
30°	707.5	674.9	648.1	629.3	620.5	612.8	610.5	609.0	611.3	613.2
32.5°	679.2	646.2	619.3	600.9	593.3	586.0	585.6	584.8	587.5	589.8
35°	648.5	616.3	590.2	572.9	565.6	559.5	560.7	561.8	564.9	567.6
37.5°	617.4	586.0	561.0	545.3	538.4	533.4	536.9	538.4	542.6	545.3
40°	586.0	554.5	531.5	517.3	510.4	508.1	513.1	516.6	521.5	523.8
42.5°	553.8	524.6	501.6	488.6	482.8	482.8	489.3	494.7	500.4	502.7
45°	521.5	493.2	471.3	459.4	455.2	458.3	465.9	472.8	480.1	482.4
47.5°	488.9	461.3	441.4	430.7	428.4	433.0	442.5	451.7	460.2	463.2
50°	456.3	431.4	411.5	401.5	401.5	407.3	419.5	431.0	440.2	443.3
52.5°	423.8	400.0	379.6	372.4	373.9	382.0	396.1	408.0	418.4	421.4
55°	390.8	367.4	349.7	343.6	346.3	356.3	370.8	384.6	394.6	398.1
57.5°	358.2	335.9	319.8	314.8	318.7	329.8	346.7	358.6	368.9	372.0
60°	325.2	302.6	289.9	286.1	291.1	302.6	319.8	330.9	340.5	343.6
62.5°	292.6	271.5	260.4	256.9	262.7	275.0	291.8	301.8	309.1	312.2
65°	259.6	240.8	230.5	228.2	234.3	246.2	262.3	270.7	276.1	279.2
67.5°	227.0	210.9	201.3	199.4	205.9	216.7	231.6	236.2	241.2	244.3
70°	194.8	180.2	172.2	171.0	176.8	187.1	199.8	202.1	204.8	207.5
72.5°	163.0	151.5	143.4	143.0	148.4	156.8	167.2	167.6	168.3	171.0
75°	132.3	121.9	115.8	117.0	120.0	126.9	135.0	132.7	133.1	135.0
77.5°	102.8	94.3	90.1	90.9	93.2	98.2	103.5	100.9	99.3	101.2
80°	74.0	66.7	65.2	65.6	67.1	70.6	73.6	71.3	68.3	69.8
82.5°	48.7	44.1	43.3	43.7	44.9	46.8	47.6	44.1	43.3	44.5
85°	26.8	24.9	24.9	26.1	26.5	26.8	26.8	24.9	25.3	26.1
87.5°	10.7	10.7	11.9	13.0	12.3	10.7	9.2	6.1	6.1	7.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)